



Prevention

H1N1 INFLUENZA PATIENTS AT INCREASED RISK FOR MYOCARDIAL INFARCTION

ACC Moderated Poster Contributions
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Background: The purpose of this study was to determine whether 2009 influenza patients (pts), including H1N1 influenza pts, had increased risk of subsequent myocardial infarction (MI), particularly in pts with coronary artery disease (CAD).

Methods: Patients (N=45,180) within an integrated healthcare system without a prior MI were studied and stratified into 4 groups: 2009 influenza pts (May 2009-Oct 2010, n=4632; 468, 10%, confirmed H1N1 cases); bacterial pneumonia pts (May 2009-Oct 2010, n=1056), 2007 influenza pts (May 2007-Oct 2008, n=1539), and general CAD pts seen for non-pneumonia or non-influenza reason (May 2009-Oct 2010, n=37,953). Logistic regression was used to determine associations between the 4 groups and MI (follow-up: 30 days to 2 years) with adjustment by age, sex, race, body mass index, and inpatient status at the initial visit.

Results: The baseline demographics differed between the groups ($p<0.0001$; except for % males with prior CAD, $p=0.76$) (Table). After adjustment by these differences, the 2009 influenza pts had a significant increased risk of MI compared to the 2007 influenza pts ($p=0.032$), and a trend towards increased risk compared to bacterial pneumonia pts ($p=0.053$). In pts with CAD, the 2009 influenza pts had a significant increased risk of MI compared to the bacterial pneumonia pts ($p=0.01$) and general CAD pts ($p=0.003$), but not compared to the 2007 influenza pts ($p=0.11$).

Conclusions: The 2009 influenza pts had a higher risk for MI, particularly in pts with prior CAD diagnosis.

	N	Age mean (SD)	Male	White	BMI mean (SD)	Inpatient	% MI	MI Adjusted OR*
2009 (H1N1) Influenza	4632	35.5 (15.1)	40.4%	71.3%	31.6 (8.4)	13.3%	0.37%	1
2007 Influenza	1539	42.1 (19.4)	45.0%	79.6%	30.2 (7.9)	15.1%	0.19%	9.62 (1.2, 76.9)**
Bacterial Pneumonia	1056	61.1 (19.1)	51.4%	86.3%	29.4 (8.3)	89.0%	1.04%	2.56 (0.99, 6.7)
Prior CAD diagnosis								
2009 (H1N1) Influenza	167	61.3 (13.2)	57.5%	85.6%	32.6 (7.3)	41.3%	4.79%	1
2007 Influenza	107	73.2 (14.4)	67.3%	91.6%	31.7 (7.8)	56.1%	1.87%	5.68 (0.7, 45.5)
Bacterial Pneumonia	300	72.5 (11.4)	58.0%	94.0%	29.9 (8.3)	85.7%	1.33%	4.98 (1.5, 16.9) †
General CAD	37,953	70.9 (11.9)	60.0%	94.8%	30.1 (6.8)	9.2%	1.94%	3.04 (1.5, 6.3) ††

* Adjusted odds ratio (OR) are for risk of MI for the 2009 influenza group vs. other groups while adjusting for age, sex, race, BMI, and inpatient status at initial visit ** $p=0.032$ † $p=0.010$ †† $p=0.027$